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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,034	07/07/2003	Han-Chung Ryu	1349.1261	9400
21171	7590	07/22/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			NGUYEN, LAM S	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/613,034	RYU ET AL.	
	Examiner	Art Unit	
	LAM S. NGUYEN	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26, 29 and 30 is/are pending in the application.
- 4a) Of the above claim(s) 27 and 28 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16 is/are allowed.
- 6) ☒ Claim(s) 17-26, 29 is/are rejected.
- 7) ☒ Claim(s) 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In response to the restriction requirement, the applicants elected without traverse claims 1-26 and 29-30 for further prosecution. As a result, claims 27-28 has been withdrawn from prosecution.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 17 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claim recites the limitation “transmitting the power-off control signal” without mentioning where and/or where the power-off signal is generated. As a result, one of ordinary skill in the art cannot make and/or use the invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 17 recites the limitation "the printer driving power supply" on line 3 and “the power-off control signal” on line 10 without sufficient antecedent basis in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 17-26, 29 are rejected under 35 U.S.C. 102(a) as being anticipated by Choo et al. (US 2002/0125867 A1).

Choo et al. discloses a method of controlling power a which is provided in a printer and which receives power from an external power supply (*Fig. 2, element RECTIFIER CIRCUIT*) and to generate a voltage for driving the printer, a printer driving power supply controlling unit (*FIG. 2, element 210*) which controls the printer driving power supply (*FIG. 2, element FET*), and a switch (*Fig. 2, element SW2*) which switches on or off according to a manipulation of a user, the method comprising:

setting the switch to the on-state while the printer driving power supply is on and generating a switch-on signal in response, transmitting the switch-on signal to the printer driving power supply controlling unit (*Fig. 2: When the SW2 is closed, a current goes through transistor Q1 to provide a voltage to pin P1 of controller 210*), and

transmitting the power-off control signal to the printer driving power supply, to turn off the printer driving power supply (*FIG. 2: The light signal emitted from PhD2 is received by the photocoupler PhQ2 to provide an OFF signal to pin P5 of the controller 210 to turn off the output P3*).

Referring to claim 18: further comprising controlling the printer driving power supply to turn on when the printer power supply is in an off-state and either the switch is set to the on-state or a predetermined printer driving power-on signal is generated (*FIG. 2: Either SW2 is on closed state or PhQ3 is ON state, the driving power supply FET is turned on*).

Referring to claims 19-24, 29: wherein the controlling of the printer driving power supply to be turned on further comprises: generating the printer driving power-on signal to turn on the printer driving power supply when a host, connected with the printer, is turned on (*FIG. 2, element 230*).

Referring to claims 22, 25-26, 29: generating the printer driving power-off signal to turn off the printer driving power supply when a predetermined time has elapsed after a setting of the printer to sleep mode in which the printer does not perform printing for a predetermined time (*Column 2, lines 35-40*).

Referring to claims 29: An apparatus for providing power to a printer, comprising

- a controller (*FIG. 2, element 230*)
- a user operable switch (*FIG. 2, element Sw2*); and
- a switching mode power (*FIG. 2, element 205*), comprising:
 - a transformer (*FIG. 2, element 215*) which converts primary power to secondary power in response to repetitive switching of a current in a primary winding of the transformer and supplies the secondary power to the printer,
 - an electronic switch (*FIG. 2, element FET*) which performs the repetitive switching in response to a pulse width modulated (PWM) control signal, and
 - a pulse width modulator (*FIG. 2, element PWM-IC*) which outputs the PWM control signal in response to a power on control signal output by the controller or by an operation of the user operable switch and stops the output of the PWM control signal in response to a power off control signal.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Majid et al. (US 5995384) in view of Nishita et al. (US 6529392).

Majid et al. discloses a method of controlling power a which is provided in an electrical device and which receives power from an external power supply (*Fig. 2, element REC and AC source*) and to generate a voltage for driving the device, a device driving power supply controlling unit (*FIG. 2, element CONTROLLER IC*) which controls the device driving power supply (*FIG. 2, element TR11*), and a switch (*Fig. 2, element SW3*) which switches on or off accordance to a manipulation of a user (*column 1, lines 18-22*), the method comprising:

setting the switch to the on-state while the device driving power supply is on and generating a switch-on signal in response, transmitting the switch-on signal to the device driving power supply controlling unit (*column 5, lines 1-10: Once switch Sw3 is closed, a voltage at the cathode of the zener Z2 is transmitted to the OOB input of the controller*), and

transmitting the power-off control signal to the device driving power supply, to turn off the device driving power supply (*FIG. 2 and column 5, lines 26-32: The light signal emitted from D14 is received by the Tr12 to stop the Tr11 from switching. As a result, transformer TR ceases transferring energy*).

Majid et al. does not disclose wherein the device is a printer.

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Nishida et al. discloses a switching power supply unit used in a printing apparatus operating in an optimum mode either when the printer works in a normal mode or a waiting mode (*column 4, lines 5-20*).

Therefore, it would have been obvious for one having ordinary skill in the art at the time invention was made use the switching power supply disclosed by Majid et al. in a printing system to provide power to a printer as disclosed by Nishida et al. The motivation for doing so is to optimize the operation of the printer either in normal work mode or waiting mode as taught by Nishida et al. (*column 4, lines 5-20*).

Allowable Subject Matter

Claim 1-16 are allowed and claim 30 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Referring to claim 1: The primary reasons for the indication of the allowability of the claim is the inclusions therein, in combination as currently claimed, of the limitation that when the switch-on signal is received at the printer driving power supply controlling unit with the printer driving power supply on, the printer driving power-off signal is generated by the printer driving power supply controlling unit and transmitted to the power-on signal detection driving unit so as to turn off the printer driving power supply is neither disclosed nor taught by the cited prior art of record, alone or in combination.

Referring to claim 30: The primary reasons for the indication of the allowability of the claim is the inclusions therein, in combination as currently claimed, of the limitation that a photo coupler comprising a photo diode and a photo transistor, the photo diode serially connected

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between the user operable switch and an input of the PWM modulator and which communicates the operation of the user operated switch to the PWM modulator, the photo transistor having a collector connected to an input of the controller and a base which optically communicates with the photo diode, wherein if the PWM control signal is currently being output to the electronic switch and the user operable switch is operated, the photo diode and the photo transistor communicate a signal to the controller to output the power off signal to the PWM modulator is neither disclosed nor taught by the cited prior art of record, alone or in combination.

Claims 2-16 are allowed because they depend directly/indirectly on claim 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S. NGUYEN whose telephone number is (571)272-2151. The examiner can normally be reached on 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D. MEIER can be reached on (571)272-2149. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LN
07/16/05

Hai Pham
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PRIMARY EXAMINER